ABSTRACT OF THE DISCLOSURE

A solid-state image pickup apparatus includes a timing signal generator for generating timing signals. Particular gates formed in each of photosensitive cells arranged in an image pickup section are driven independently or simultaneously in response to the timing signals. In an independent drive mode, outputs each having particular sensitivity are obtained from the different photosensitive regions of the individual cell by one time of exposure, covering a range of sensitivity as broad as one achievable with repeated photometry. This reduces the number of times of photometry for determining adequate exposure. In a simultaneous drive mode, outputs are produced in the usual manner. An exposure value calculator converts the resulting image signals to values having a predetermined format while an exposure parameter determining section determines exposure parameters if those values are adequate.